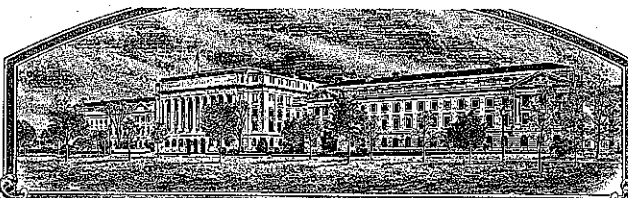


No.

200100197



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Dr. Peter Franck

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

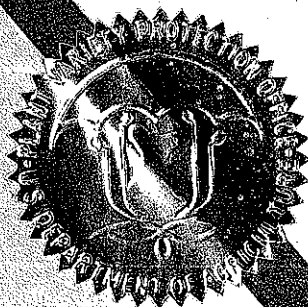
NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS A CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE SEED. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT, COMMON

'Granite'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this second day of April, in the year two thousand two.

Attest:



Paul M. Jankel



Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Arthur L. Leman

Secretary of Agriculture

REPRODUCE LOCALLY. Include form number and date on all reproductions

Form Approved - OMB No. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE <i>(Instructions and information collection burden statement on reverse)</i>		The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995. Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426)	
1. NAME OF OWNER DR. PETER FRANCK		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME ACS 97606	
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) PFLANZENZUCHT OBERLIMPURG - ACS/P20 - SCHWAEBISCH HALL D74513 GERMANY		3. VARIETY NAME GRANITE	
		FOR OFFICIAL USE ONLY	
		PVPO NUMBER 200100197	
		FILING DATE May 9, 2001	
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.)		8. IF INCORPORATED, GIVE STATE OF INCORPORATION	
		9. DATE OF INCORPORATION	
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers) Seed-Link Inc. P.O. Box 217 208 St. David St. Lindsay, Ontario K9V 5Z4		FILING AND EXAMINATION FEES: \$ 2705.00 DATE 5/9/01 CERTIFICATION FEE: \$ 320.00 DATE 1-16-02	
11. TELEPHONE (Include area code) 705-324-0544	12. FAX (Include area code) 705-324-2550	13. E-MAIL sloffice@seed-link.ca	14. CROP KIND (Common Name) WHEAT
15. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse) a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety d. <input type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$2,450), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)		19. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? See Section 83(a) of the Plant Variety Protection Act <input checked="" type="checkbox"/> YES (If "yes", answer items 20 and 21 below) <input type="checkbox"/> NO (If "no," go to item 22) 20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? IF YES, WHICH CLASSES? <input checked="" type="checkbox"/> FOUNDATION <input checked="" type="checkbox"/> REGISTERED <input checked="" type="checkbox"/> CERTIFIED 21. DOES THE OWNER SPECIFY THAT THE CLASSES BE LIMITED AS TO NUMBER OF GENERATIONS? IF YES, SPECIFY THE NUMBER 1, 2, 3, etc. <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED (If additional explanation is necessary, please use the space indicated on the reverse.)	
22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)		23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)	
4. The owners declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate. The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Owner(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.			
SIGNATURE OF OWNER 		SIGNATURE OF OWNER 	
NAME (Please print or type) DR. PETER FRANCK		NAME (Please print or type) Dr. Peter Franck	
CAPACITY OR TITLE CBO	DATE April 11, 2001	CAPACITY OR TITLE	DATE

INSTRUCTIONS

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), ALL of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to reproduce the variety, or for tuber reproduced varieties verification that a viable (in the sense that it will reproduce an entire plant) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$2,450 (\$300 filing fee and \$2,150 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfilled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 500, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$300 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office

Telephone: (301) 504-5518

FAX: (301) 504-5291

Homepage: <http://www.ams.usda.gov/science/pvp.htm>

ITEM

- 18a. Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method; (2) the details of subsequent stages of selection and multiplication; (3) evidence of uniformity and stability; and (4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 18b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
- (1) identify these varieties and state all differences objectively;
 - (2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
 - (3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness
- 18c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 18d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 18e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
19. If "Yes" is specified (*seed of this variety be sold by variety name only, as a class of certified seed*), the applicant MAY NOT reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See *Regulations and Rules of Practice, Section 97.103*).
22. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
23. See Section 5.5 of the Act for instructions on claiming the benefit of an earlier filing date.

2. CONTINUED FROM FRONT (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

3. CONTINUED FROM FRONT (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

PBR - CANADA - application accepted January 30, 2001
filing number: 01-2533

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 7.175(h) of the Regulations and Rules of Practice.)

o avoid conflict with other variety names in use, the applicant must check the variety names proposed by contacting: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center-East, Beltsville, MD 20705. Telephone: (301) 504-8089.

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Agriculture, Clearance Officer, OIRM, AG Box 7630, Jamie L. Whitten Building, Washington, D.C. 20250. When replying, refer to OMB No. 0581-0055 and form number in your letter. Under the PRA of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

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IT-470 (6-98) designed by the Plant Variety Protection Office with WordPerfect 6.0a. Replaces STD 470 (03-96) which is obsolete.

200100197

ACS 97606

Exhibit A: Origin and Breeding History

ACS 97606 is a hard red spring wheat selected by Pflanzenzucht Oberlímpurg. The final cross was made in 1989. The pedigree is ACS 54m-K x ((LNL x Tg) x (Sosap x 312 S). Line ACS 54m-K (mexican background) was high in yield and had good results in powdery mildew. 312 S had good quality results, especially high protein and high test weight. Lines LNL, Tg and Sosap are all german lines never become named). The breeding method was pedigree selection from F1 to F6 and pedigree trial from F7 and F9. During that time this line has been selected on good quality with high yield. In F9 breeders seed was first bulked as random 1200 F10 single plant progenies. This F10 seed was planted in May 1998 for a small increase. In 1999 Breeder's seed was produced near Bozeman, MT. This seed will be used to plant 10-15 acres near Bozeman and seed from this field will be harvested as Foundation and Registered seed. Anticipated first commercial seed sale of Certified seed will be in the spring of 2002.

ACS 97606 will be maintained throughout the duration of Plant Breeders Rights at Oberlímpurg based on 800 single plant progenies sown annually as „ear to row“. Negative selection is based on obvious criteria in all stages from 4-leaf-stage to harvest. Breeders seed production is generated from this material.

A variant that is similar to ACS 97606, but has no awns and is 2 to 4 inches taller, occurs at a frequency of up to .05% (5 per 10,000 plants). Otherwise ACS 97606, is a uniform and stable variety in agronomic appearance and performance across several generations (F6 to F10) and growing conditions.



Dr. Peter Franck

Exhibit A: Origin and Breeding History of the Variety

Pedigree:

ACS 54m-K:	Kentana 54B (Mexico)
LNL:	Liechti, Newshatch, Liechti
Sosap:	Solo x Sappo
Tg:	Chat selection (Mexico)
312S:	german line never become named

Please replace Table 1-2 by the new ones (Tab. 1-3).

Exhibit B: Statement of Distinctness

Granite is most similar to Conan. However, Granite is 3 days later for ear emergence (see statistical analysis Table 1-3). Granite is 3 cm taller, and the stem of Granite is hollow, whereas the stems of Conan are solid to semi-solid. Granite is susceptible to the wheat stem sawfly whereas Conan is tolerant to the wheat stem sawfly.

Exhibit D: Milling and Baking Data

see Table 4 and 5

Exhibit B

Measurement for spring wheat varieties Granite (ACS 97606) and Conan

From both varieties, Granite (ACS 97606) and Conan, 20 plants were examined in two locations and two years and the characters were measured. The datas were calculated with PLABSTAT (Utz, 1989).

Location 1: Bozeman, Montana, USA
1999: planting 17.05., harvesting 19.09.
2000: planting 21.04., harvesting 04.09.

Location 2: Oberlimpurg, Schwäbisch Hall, Germany
1999: planting 20.03., harvesting 15.08.
2000: planting 15.03., harvesting 10.08.

A test for skewness and curtosis was made to make sure that the datas were normal-distributed. The original datas, mean values and variances for each variety, each year and each location are given in Tab.1 and Tab.2.

An ANOVA survey was made over years and locations to test if the two varieties can be distinguished from each other. In the statistical model varieties, locations and years were regarded as factorial factors. Repetitional measurements within varieties, locations and years were regarded as hierarchical factors.

Utz 1989: Plabstat. Ein Computerprogramm zur statistischen Analyse von pflanzenzüchterischen Experimenten. Version 2D. Institut für Pflanzenzüchtung, Saatgutforschung und Populationsgenetik, Universität Hohenheim, D-70599 Stuttgart

Tab. 1 Plant height (cm)

[illegible]

Tab. 2 ear emergence (from 1st of January)

variety	character	year	locat.	measurements (mm)																		mean	total mean	variance		
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20			
ACS97606	ear	1999	loc 1	191	190	189	190	190	190	190	188	189	191	190	190	191	190	189	191	190	190	190	190	189.95		0.576
	emergence		loc 2	165	164	163	165	165	165	164	165	165	166	165	167	165	162	164	165	165	167	166	165	164.90	1.358	
		2000	loc 1	164	164	162	164	165	163	164	165	164	164	164	164	165	163	164	164	164	163	164	165	163.95	0.576	
			loc 2	159	160	161	159	159	160	158	157	159	157	159	159	158	160	159	158	159	159	159	159	158.43	0.937	
Conan	ear	1999	loc 1	186	186	187	186	185	187	189	187	187	188	187	185	187	188	187	186	187	187	187	187	186.80	0.905	
	emergence		loc 2	160	162	161	162	161	162	163	164	160	162	162	165	162	162	162	163	163	162	162	162	162.10	1.358	
		2000	loc 1	161	160	159	161	162	161	161	161	161	161	162	161	162	161	160	164	163	161	161	159	161.10	1.358	
			loc 2	156	153	156	157	159	156	156	158	156	156	157	154	155	157	156	157	152	156	158	156	156	156.05	2.682

Tab. 3: Significance of examined characters

			plant height			heading date	
	DF	MS	F-value	sign.	MS	F-value	sign.
Varieties (Var)	1	19.0653	504.21	*	16.97	1107.89	*
Locations (Loc)	1	3.8503	101.83	n.s.	447.8	29239.99	**
Var x Loc	1	0.0003	0.01	n.s.	0.015	1.00	n.s.
Years (Yrs)	1	1.0153	26.85	n.s.	508	33174.86	**
Var x Yrs	1	0.0028	0.07	n.s.	0.008	0.51	n.s.
Loc x Yrs	1	0.0703	1.86	n.s.	196.5	12833.20	**
Var x Loc x Yrs	1	0.0378			0.015		

REPRODUCE LOCALLY. Include form number and date on all reproductions.

Form Approved - OMB No. 0581-0055

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To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

EXHIBIT C
(Wheat)

OBJECTIVE DESCRIPTION OF VARIETY
WHEAT (*Triticum* spp.)

NAME OF APPLICANT(S) Dr. Peter Franck	FOR OFFICIAL USE ONLY
ADDRESS (Street and No. or RD No., City, State, and Zip Code) Pflanzenzucht Oberlimpurg Dr. Franck 74523 Schwäbisch Hall Germany	FVPO NUMBER 200100197
	VARIETY NAME GRANITE
	TEMPORARY OR EXPERIMENTAL DESIGNATION ACS 97606

PLEASE READ ALL INSTRUCTIONS CAREFULLY: Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in the first box (e.g. or) when number is either 99 or less or 9 or less respectively. Data for quantitative plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties entered in the same trial. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used: _____
Please answer all questions for your variety; lack of response may delay progress of your application.

1. KIND:

1=Common

2=Durum

3=Club

4=Other (SPECIFY): _____

2. VERNALIZATION:

1=Spring

2=Winter

3=Other (SPECIFY): _____

3. COLEOPTILE ANTHOCYANIN:

1=Absent

2=Present

4. JUVENILE PLANT GROWTH:

1=Prostrate

2=Semi-erect

3=Erect

5. PLANT COLOR (boot stage):

1 = Yellow-Green

2 = Green

3 = Blue-Green

6. FLAG LEAF (boot stage):

1 = Erect

2 = Recurved

1 = Not Twisted

2 = Twisted

7. EAR EMERGENCE:

Number of Days Earlier Than _____ *

Number of Days Later Than Conan _____ *

8. ANTHOR COLOR:

☒ 1

1 = Yellow

2 = Purple

9. PLANT HEIGHT (from soil to top of head, excluding awns):

☐ 0 ☒ 3

cm Taller Than Conan

☒ 1 ☐ 8

cm Shorter Than Fortuna

* Relative to a PVPO-Approved Commercial Variety Grown in the Same Trial

10. STEM:

A. ANTHOCYANIN

☒ 1

1 = Absent

2 = Present

B. WAXY BLOOM

☒ 2

1 = Absent

2 = Present

C. HAIRINESS (last internode of rachis)

☒ 1

1 = Absent

2 = Present

D. INTERNODE (SPECIFY NUMBER)

☒ 1

1 = Hollow

2 = Semi-solid

3 = Solid

E. PEDUNCLE

☐

1 = Absent

2 = Present

☐

cm Length

11. HEAD (at Maturity):

A. DENSITY

☒ 2

1 = Lax

2 = Middense

3 = Dense

B. SHAPE

☒ 1

1 = Tapering

2 = Strap

3 = Clavate

4 = Other (SPECIFY):

C. CURVATURE

☒ 1

1 = Erect

2 = Inclined

3 = Recurved

D. AWNEDNESS

☒ 4

1 = Awnless

2 = Apically Awnletted

3 = Awnletted

4 = Awned

12. GLUMES (at Maturity):

A. COLOR

☒ 1

1 = White

2 = Tan

3 = Other (SPECIFY):

C. BEAK

☒ 1

1 = Obtuse

2 = Acute

3 = Acuminate

B. SHOULDER

☒ 1

1 = Wanting

2 = Oblique

3 = Rounded

4 = Square

5 = Elevated

6 = Apiculate

D. LENGTH

☒ 2

1 = Short

2 = Medium

(ca. 7mm)

(ca. 8mm)

3 = Long (ca. 9mm)

12. GLUMES (at Maturity) Continued:

E. WIDTH

- ☒ 1 = Narrow (ca. 3mm) 2 = Medium (ca. 3.5mm)
3 = Wide (ca. 4mm)

13. SEED:

A. SHAPE

- ☒ 1 = Ovate 2 = Oval 3 = Elliptical

B. CHEEK

- ☒ 1 = Rounded 2 = Angular

E. Color

- ☒ 3 = White 2 = Amber 3 = Red
4 = OTHER (Specify)

F. TEXTURE

- ☒ 1 = Hard 2 = Soft

C. BRUSH

- ☒ 1 = Short 2 = Medium 3 = Long

- ☒ 1 = Not Collared 2 = Collared

D. CREASE

- ☒ 2 = Width 60% or less of Kernel
2 = Width 80% or less of Kernel
3 = Width Nearly as Wide as Kernel

- ☒ 2 = Depth 20% or less of Kernel
2 = Depth 35% or less of Kernel
3 = Depth 50% or less of Kernel

G. PHENOL REACTION (see instructions):

- ☒ 3 = Ivory 2 = Fawn
3 = Light Brown 4 = Dark Brown
5 = Black

14. DISEASE: (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTED

- | | |
|---|--|
| <input type="checkbox"/> Stem Rust (<i>Puccinia graminis</i> f. sp. <i>tritici</i>) | <input type="checkbox"/> Leaf Rust (<i>Puccinia recondita</i> f. sp. <i>tritici</i>) |
| <input type="checkbox"/> Stripe Rust (<i>Puccinia striiformis</i>) | <input type="checkbox"/> 0 Loose Smut (<i>Ustilago tritici</i>) |
| <input type="checkbox"/> 0 Tan Spot (<i>Pyrenophora tritici-repentis</i>) | <input type="checkbox"/> 0 Flag Smut (<i>Urocystis agropyri</i>) |
| <input type="checkbox"/> 0 Halo Spot (<i>Selenophoma donacis</i>) | <input type="checkbox"/> 0 Common Bunt (<i>Tilletia tritici</i> or <i>T. laevis</i>) |
| <input type="checkbox"/> <i>Septoria nodorum</i> (Glume Blotch) | <input type="checkbox"/> 0 Dwarf Bunt (<i>Tilletia controversa</i>) |
| <input type="checkbox"/> 0 <i>Septoria avenae</i> (Speckled Leaf Disease) | <input type="checkbox"/> 0 Karnal Bunt (<i>Tilletia indica</i>) |
| <input type="checkbox"/> <i>Septoria tritici</i> (Speckled Leaf Blotch) | <input type="checkbox"/> Powdery Mildew (<i>Erysiphe graminis</i> f. sp. <i>tritici</i>) |
| <input type="checkbox"/> Scab (<i>Fusarium</i> spp.) | <input type="checkbox"/> 0 "Snow Molds" |

14. Disease (Continued) (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTED

- | | |
|---|---|
| <input type="checkbox"/> "Black Point" (Kernel Smudge) | <input type="checkbox"/> Common Root Rot (<i>Fusarium</i> , <i>Cochliobolus</i> and <i>Bipolaris</i> spp.) |
| <input type="checkbox"/> Barley Yellow Dwarf Virus (BYDV) | <input type="checkbox"/> Rhizoctonia Root Rot (<i>Rhizoctonia solani</i>) |
| <input type="checkbox"/> Soilborne Mosaic Virus (SBMV) | <input type="checkbox"/> Black Chaff (<i>Xanthomonas campestris</i> pv. <i>translucens</i>) |
| <input type="checkbox"/> Wheat Yellow (Spindle Streak) Mosaic Virus | <input type="checkbox"/> Bacterial Leaf Blight (<i>Pseudomonas syringae</i> pv. <i>syringae</i>) |
| <input type="checkbox"/> Wheat Streak Mosaic Virus (WSMV) | <input type="checkbox"/> Other (SPECIFY) |
| <input type="checkbox"/> Other (SPECIFY) | <input type="checkbox"/> Other (SPECIFY) |
| <input type="checkbox"/> Other (SPECIFY) | <input type="checkbox"/> Other (SPECIFY) |
| <input type="checkbox"/> Other (SPECIFY) | <input type="checkbox"/> Other (SPECIFY) |

15. INSECT: (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE SPECIFY BIOTYPE (where needed)

- | | |
|--|--|
| <input type="checkbox"/> Hessian Fly (<i>Mayetiola destructor</i>) | <input type="checkbox"/> Other (SPECIFY) |
| <input type="checkbox"/> Stem Sawfly (<i>Cephus</i> spp.) | <input type="checkbox"/> Other (SPECIFY) |
| <input type="checkbox"/> Cereal Leaf Beetle (<i>Oulema melanopa</i>) | <input type="checkbox"/> Other (SPECIFY) |
| <input type="checkbox"/> Russian Aphid (<i>Diuraphis noxia</i>) | <input type="checkbox"/> Other (SPECIFY) |
| <input type="checkbox"/> Greenbug (<i>Schizaphis graminum</i>) | <input type="checkbox"/> Other (SPECIFY) |
| <input type="checkbox"/> Aphids | <input type="checkbox"/> Other (SPECIFY) |

16. ADDITIONAL INFORMATION ON ANY ITEM ABOVE, OR GENERAL COMMENTS

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Table 4: Advanced Spring Wheat Yield Trial
Means Across Locations: Bozeman (irrigated), Havre, & Sidney (irrigated & dryland), MT

Sample No.	Variety	Class Pedigree	Wheat Protein, % (12%mb)	Flour Protein, % (14%mb)	Flour Yield, %	Mixograph Type	Mixing Tolerance	Mixto Water Absorption, min	Bake Water Absorption, %	Bake Mixing Time, min	Loaf Volume	Crumb Grain Score	wht protein- flour protein
2 CI 13596	HRS	FORTUNA	14.7	68.7	12.4	0.43	3	2.9	62.6	4.4	72.8	1046	2.3
3 CI 17429	HRS	LEW	14.7	68.0	12.5	0.43	4	4.2	63.0	7.7	72.8	1131	2.2
4 CI 17430	HRS	NEWMANA	14.0	63.4	11.8	0.40	4	2.9	61.6	5.1	71.5	1099	2.3
5 PI549275	HRS	HI-LINE	15.1	63.6	12.6	0.41	5	4.2	63.4	7.5	74.5	1154	2.6
6 PI574642	HRS	MCNEAL	14.5	66.0	12.1	0.42	5	4.4	63.2	8.2	74.4	1085	2.4
7 PI527682	HRS	AMIDON	15.1	69.2	12.8	0.43	4	2.9	63.8	3.8	72.8	1068	2.2
8 PI592761	HRS	ERNEST	15.9	68.8	13.3	0.39	4	3.3	64.5	6.7	74.5	1133	2.6
9 PI607557	HRS	SCHOLAR	15.2	69.9	12.8	0.44	4	2.6	63.9	3.6	73.3	1053	2.6
10 WB 926	HRS	WESTBRED 926	15.1	67.2	12.5	0.44	4	3.6	62.7	5.6	72.5	1093	2.4
11 B2992588	HRS	CONAN	15.2	64.6	12.4	0.40	4	4.0	62.4	6.4	73.1	1100	2.9
12 ND 694	HRS	PARSHALL	15.4	68.3	13.1	0.40	4	3.2	64.2	5.0	74.3	1116	2.3
13 ND 695	HRS	REEDER	15.1	67.0	12.8	0.36	4	2.8	63.2	3.8	73.3	1064	2.3
38 BZ992322	HRS	HANK	15.0	67.0	12.5	0.41	4	4.3	62.0	6.5	72.2	1099	2.5
39 ACS 97606	HRS	ACS 97606	16.5	65.6	14.0	0.40	2	3.1	63.2	4.6	73.0	1083	2.5
64 ND 690	HWS	ARGENT	14.9	67.6	12.8	0.44	4	4.3	62.5	6.2	73.0	1139	2.1
Average			15.1	67.0	12.7	0.41	4	3.5	63.1	5.7	73.2	1098	3
Min			14.0	63.4	11.8	0.36	2	2.6	61.6	3.6	71.5	1046	3
Max			16.5	69.9	14.0	0.44	5	4.4	64.5	8.2	74.5	1154	4

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Table 5: Milling and baking quality data of Granite compared to check varieties in the Advanced Spring Wheat Trial, 1999

Identification	Wheat			Test Weight	SKCS			Flour				Bake						
	NIT Moisture	12% mb Ash	Protein		Thousand Kernel Weight	Hardness	Diameter	Kernel Weight	14% mb Ash	14% mb Protein	Loss	Extraction	Absorption	Mix Time	Volume	Dough	Ext.	Inter.
Pristine	10.50	1.399	14.69	64.3	68	3.18	49.7	0.402	13.27	1.42	77.40	61.0	30	2650	40	9	42	91
Conan	10.50	1.627	16.14	60.2	88	2.37	29.5	0.428	13.85	1.29	72.40	64.5	60	2825	24	7	39	70
Zeke	10.10	1.420	13.76	60.5	59	2.85	43.9	0.431	12.76	1.00	77.90	62.0	60	2725	22	9	42	73
ACS 97606	10.20	1.552	16.49	64.9	72	2.77	35.9	0.491	15.56	0.93	74.60	67.0	10	2650	36	7	26	69

Quality tests performed by Kurt Becker ConAgra Milling Co.

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

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EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) DR. PETER FRANCK Dr. Peter Franck		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER ACS 97606	3. VARIETY NAME GRANITE
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country) PFLANZENZUCHT OBERLITPURG - ACS / P20 - SCHWABEISCH HALL D 74523 GERMANY		5. TELEPHONE (include area code) 49-791-931120	6. FAX (include area code) 49-791-47333
		7. PVPO NUMBER 200100197	

8. Does the applicant own all rights to the variety? Mark an "X" in appropriate block. If no, please explain. ☒ YES ☐ NO

9. Is the applicant (individual or company) a U.S. national or U.S. based company? ☐ YES ☒ NO
If no, give name of country **GERMANY (UPOV-member-state)**

10. Is the applicant the original owner? ☒ YES ☐ NO If no, please answer one of the following:

a. If original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. national(s)?

☐ YES ☐ NO If no, give name of country

b. If original rights to variety were owned by a company(ies), is(are) the original owner(s) a U.S. based company?

☐ YES ☐ NO If no, give name of country

11. Additional explanation on ownership (if needed, use reverse for extra space):

PLEASE NOTE:

Plant variety protection can be afforded only to owners (not licensees) who meet one of the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definition.

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